

REMARKS

Applicant requests further consideration of the Application in view of the amendments above and comments which follow.

Status of the Claims

Claims 1-5 and 8-15 are pending, Claims 6 and 7 being cancelled by the present amendments. Claims 1-15 stand rejected under §112, second paragraph. Claims 1, 2, 4, 5, 8, 9, 11 and 15 stand rejected under §102(e) as being anticipated by U.S. Patent No. 5,815,227 to Lee (hereinafter, "Lee"). Claims 1-4, 8 and 9 stand rejected under §102(b) as being anticipated by U.S. Patent No. 5,228,223 to Lan (hereinafter, "Lan"). Claims 1, 2, 4, 5, 7, 8 and 10 stand rejected under §102(e) as being anticipated by U.S. Patent No. 5,613,751 to Parker et al. (hereinafter, "Parker et al."). Claims 5 and 6 stand rejected under §102(e) as being anticipated by U.S. Patent No. 5,769,521 to Osawa et al. (hereinafter, "Osawa et al."). Claims 5 and 7 stand rejected under §102(b) as being anticipated by U.S. Patent No. 4,929,062 to Guzik et al. (hereinafter, "Guzik et al."). Claim 13 stands rejected under §103 as being unpatentable over Lee in view of U.S. Patent No. 5,070,431 to Kitazawa et al. (hereinafter, "Kitazawa et al.").

Drawings

The drawings stand objected to under 37 C.F.R. 1.83(a). The Office Action states that the following must be shown or the features cancelled from the claims:

- the displayed device light guide (Claims 1-4);
- the light guide plate (Claims 5-7);
- the array of display elements on the light guide panel (Claims 11-15); and
- the plurality of integrated circuits which are electrically connected to the array of display elements (Claim 13).

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Claims 1-4 have been amended to recite a “display device light guide panel” or a “light guide panel”. The light guide panel corresponds to the light guide panel 22 as indicated in the drawings as filed.

Claims 5-7 have been amended to delete reference to a “light guide plate”. Reference is made instead to a “light guide panel”, such feature being indicated in the drawings as discussed above.

Claim 11 has been amended to delete reference to “an array of display elements”. Claim 11 as amended recites a “display panel” which corresponds to element 4 as shown in Figure 2 of the drawings as filed.

Claim 13 has been amended to delete reference to “a plurality of integrated circuits”.

In view of the foregoing, Applicant submits that the objections to the drawings have been overcome by amendment to the claims, and revision to the drawings is not necessary.

Specification

The Abstract of the Disclosure stands objected to on the grounds that the last sentence thereof refers to the purported merits of the invention. Applicant has deleted the last sentence of the Abstract. Accordingly, Applicant submits that the objection to the Abstract has been overcome.

The remaining objections to the specification have been addressed by the amendments to the claims as discussed above with regard to the objection to the drawings.

The Rejections under §112

Claims 1-15 stand rejected under §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant submits that the rejection with regard to the terms "display device light guide" and "light guide plate" are moot in view of the amendments to the claims, as discussed above with regard to the objection to the drawings.

Claim 3 has been amended to more particularly recite the relationship between the first corner, the second corner and the receiving means for the light source. Claims 9 and 14 have been similarly amended. Accordingly, Applicant submits that the Office Action's rejection regarding the meaning of the limitation beginning with "remote" has been overcome.

The term "sharp" has been deleted from the claims.

Claim 8 has been amended to positively recite a light source mounted on the mold frame. Claim 8 has also been amended to more particularly recite the light guide projection as having at least one rounded corner.

Claim 11 has also been amended to more particularly recite the light guide projection as having at least one rounded corner. Claim 11 has been further amended to more particularly recite the relationship between the light guide panel, the mold frame, and the display panel.

The claims have been further amended to provide additional description of structural cooperative relationships of the elements.

Accordingly, Applicant respectfully submits that all of the rejections under §112 should be withdrawn.

The Rejections under §102(e) over Lee Have Been Overcome:

Claim 1

Claim 1 as amended recites, *inter alia*:

means for receiving a display device light guide panel such that the light guide panel is disposed adjacent and spaced apart from the light source; and

means for fixing the light guide panel in spaced apart relation to the light source, the fixing means including at least one rounded corner, the rounded corner operative to

reduce non-uniform concentration of light from the light source in the light guide panel.

(Claim 1)(emphasis added).

By contrast, the locking holes **a'** of the Lee lamp cover **125** serve to prevent the lamp **110** from moving away from the light-inducing plate **105**, rather than preventing the light-inducing plate **105** from moving toward the lamp **110**. As best understood, the light-inducing plate **105** is prevented from moving towards the lamp **110** by angled, lengthwise grooves (not numbered) formed in the open end of the lamp cover **125**. Additionally, it does not appear that the rounded portions of the locking protrusions **a** serve to reduce non-uniform concentration of light in the light-inducing plate **105**.

Accordingly, Applicant submits that the invention of Claim 1 as amended is not anticipated by Lee, and respectfully requests that the rejection under §102 be withdrawn. Applicant further submits that the invention of Claim 1 would not have been obvious to one of ordinary skill in the art having knowledge of Lee.

Claims 2 and 4

Claims 2 and 4 depend from Claim 1, and are therefore allowable for the reasons set forth above with regard to Claim 1.

Claim 5

Claim 5 has been amended to include the limitations of former Claim 6. Claim 6 was not rejected in view of Lee.

Claim 8

Claim 8 as amended recites, *inter alia*:

a light guide panel mounted on the mold frame in

spaced apart relation from the light source, including a light guide projection mounted in the groove, the light guide projection having at least one rounded corner corresponding to the at least one rounded corner of the mold frame groove, the rounded corners of the mold frame groove and the light guide projection being cooperative to maintain the light guide panel and the light source in spaced relation, the at least one rounded corner of the light guide projection being operative to reduce concentration of the light in the light guide projection.

(Claim 8)(emphasis added).

As discussed above with regard to Claim 1, Lee does not anticipate or render obvious a combination of a mold frame, a light source mounted on the mold frame, and a light guide panel mounted on the mold frame in spaced apart relation from the light source, the light guide panel and the light source being maintained in spaced apart relation. Additionally, it does not appear that the rounded portions of the locking protrusions **a** serve to reduce concentration of light in the locking protrusions **a**.

Accordingly, Applicant submits that Claim 8 as amended is allowable over Lee, and respectfully requests that the rejection under §102 be withdrawn. Applicant further submits that the invention of Claim 8 would not have been obvious to one of ordinary skill in the art having knowledge of Lee.

Claim 9

Claim 9 as amended depends from Claim 8, and is therefore allowable for the reasons set forth above with regard to Claim 8. Additionally, Claim 9 recites a mold frame groove having a first, angled corner and a second, rounded corner, wherein the rounded corner is spaced further from the light source than the angled corner is spaced from the light source. Notably, the rounded portions of the locking protrusions **a** are disposed closer to the lamp 110 than are the angled corners of the locking protrusions **a**.

Claim 11

Claim 11 has been amended to recite the language discussed above with regard to Claim 8. Accordingly, Claim 11 is allowable over Lee for the reasons set forth above with regard to Claim 8.

Claim 15

Claim 15 depends from Claim 11, and is therefore allowable for the reasons set forth above with regard to Claim 11. Moreover, the invention of Claim 15 is further distinguishable from the Lee device in that the locking protrusions **a** are not entirely rounded.

The Rejections under §102 over Lan Have Been Overcome:

Claim 1

Claim 1 as amended recites, *inter alia*:

means for fixing the light guide panel in spaced apart relation to the light source, the fixing means including at least one rounded corner, the rounded corner operative to reduce non-uniform concentration of light from the light source in the light guide panel.

(Claim 1)(emphasis added). The only apparent rounded corners of the seat body **9** of Lan are not intended to and, as best understood, would not serve to, fix the light piercing boards **6A/6B** “in spaced apart relation to” the bulbs **13**. Moreover, it is unclear that the boards **6A/6B** are spaced apart from the bulbs **13**. For example, Lan states:

In a reserved room in the middle of seat body **9** is connected a PC board **10**, on which are connected two rows of small bulbs 13 equally distant from each other and put right against the concavely arcuate face 14 of light-piercing boards **6A** and **6B** respectively.

(Lan at Column 2, lines 35-40)(emphasis added).

Accordingly, Applicant respectfully submits that Claim 1 as amended is not anticipated by Lan, and the rejection under §102 should therefore be withdrawn. Applicant further submits that the invention of Claim 1 would not have been obvious to one of ordinary skill in the art having knowledge of Lan.

Claims 2-4

Claims 2-4 depend from Claim 1 as amended and are therefore allowable for the reasons set forth above with regard to Claim 1.

Claim 8

Claim 8 as amended recites, *inter alia*:

a light guide panel mounted on the mold frame in spaced apart relation from the light source, including a light guide projection mounted in the groove, the light guide projection having at least one rounded corner corresponding to the at least one rounded corner of the mold frame groove, the rounded corners of the mold frame groove and the light guide projection being cooperative to maintain the light guide panel and the light source in spaced relation, the at least one rounded corner of the light guide projection being operative to reduce concentration of the light in the light guide projection.

(Claim 8)(emphasis added). By contrast, the feature which Applicant understands the Office Action to identify as a “rounded corner” of a “light guide projection” is not cooperative with a mold frame groove to maintain the light piercing boards **6A/6B** and the bulbs **13** in spaced relation.

Accordingly, Applicant submits that the invention of Claim 8 is not anticipated by Lan, and respectfully requests that the rejection under §102 be withdrawn. Applicant further submits that the invention of Claim 8 would not have been obvious to one of ordinary skill in the art having knowledge of Lan.

Claim 9

Claim 9 as amended depends from Claim 8, and is therefore allowable for the reasons set forth above with regard to Claim 8. Moreover, the Lan device does not include a first, angled corner of the light piercing boards **6A/6B** which is disposed adjacent a first, angled corner of the seat body **9**, and also a second, rounded corner of the boards **6A/6B** which is disposed adjacent a second, rounded corner of the seat body **9**.

The Rejections under §102 over Parker et al. Have Been Overcome:

Claim 1

Claim 1 recites, *inter alia*:

means for receiving a display device light guide panel such that the light guide panel is disposed adjacent and spaced apart from the light source; and

means for fixing the light guide panel in spaced apart relation to the light source, the fixing means including at least one rounded corner, the rounded corner operative to reduce non-uniform concentration of light from the light source in the light guide panel.

(Claim 1)(emphasis added). By contrast, Parker et al. does not suggest means for fixing the panel member **33** in spaced apart relation to the light sources **3**. To the contrary, Parker et al. suggests that:

The light source is desirably imbedded, potted or bonded to the light transition area to eliminate any air gaps, decrease surface reflections and/or eliminate any lens effect between the light source and light transition area, thereby reducing light loss and increasing the light output from the panel assembly.

(Parker et al. at Column 1, Lines 24-30)(emphasis added). See also Parker et al. at Column 3, Lines 46-65. Thus, Parker et al. teaches away from a mold frame as recited in Claim 1 as amended.

Accordingly, Applicant submits that the invention of Claim 1 is not anticipated by Parker et al., and respectfully requests that the rejection under §102 be withdrawn. Applicant further submits that the invention of Claim 1 would not have been obvious to one of ordinary skill in the art having knowledge of Parker et al..

Claim 2 and 4

Claims 2 and 4 depend from Claim 1, and are therefore allowable for the reasons set forth above with regard to Claim 1.

Claim 5

Claim 5 has been amended to incorporate the limitations of former Claim 6. Claim 6 was not rejected in the Office Action under §102 over Parker et al..

Claim 7

Claim 7 has been cancelled.

Claim 8

Claim 8 recites, *inter alia*:

a light guide panel mounted on the mold frame in spaced apart relation from the light source, including a light guide projection mounted in the groove, the light guide projection having at least one rounded corner corresponding to the at least one rounded corner of the mold frame groove, the rounded corners of the mold frame groove and the light guide projection being cooperative to maintain the light guide panel and the light source in spaced relation, the at least one rounded corner of the light guide projection being operative to reduce concentration of

the light in the light guide projection.

(Claim 8)(emphasis added). Thus, Parker et al. teaches away from the invention of Claim 8 as discussed above with regard to Claim 1.

Accordingly, applicant submits that the invention of Claim 8 is not anticipated by Parker et al., and respectfully requests that the rejection under §102 be withdrawn. Applicant further submits that the invention of Claim 8 would not have been obvious to one of ordinary skill in the art having knowledge of Parker et al.

Claim 10

Claim 10 depends from Claim 8, and is therefore allowable for the reasons set forth above with regard to Claim 8.

The Rejections under §102 over Osawa Have Been Overcome:

Claim 5

Claim 5 has been amended to incorporate the limitations of former Claim 6. Former Claim 6 stands rejected under §102 in view of Osawa. Claim 5 as amended recites:

5. A light guide panel for a display device comprising:

a light guide projection which extends from the light guide panel, the light guide projection including at least one rounded corner and at least one angled corner, the at least one rounded corner operative to reduce concentration of light in the light guide projection.

(Claim 5)(emphasis added). Applicant respectfully submits that the hook 14 of Osawa does not include at least one rounded corner as claimed. All of the corners of the hook 14 are angled. While the joinder of the hook 14 and the remainder of the plate 11 is somewhat rounded, this rounded portion is not part of the hook 14. Therefore, Osawa does not disclose any

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feature corresponding to a light guide projection itself having at least one rounded corner, as claimed.

The Rejections under §102 over Guzik et al. Have Been Overcome:

Claim 5

Claim 5 has been amended to incorporate the limitations of former Claim 6. Former Claim 6 does not stand rejected over Guzik et al.

Claim 7

Claim 7 has been cancelled.

**The Rejections under §103 over Lee in view of
Kitazawa et al. Have Been Overcome:**

Claim 13 stands rejected under §103 over Lee in view of Kitazawa et al. Claim 13 as amended depends from Claim 11 as amended. As discussed above, Claim 11 as amended is allowable over Lee. Kitazawa does not disclose a flat panel display device including a mold frame, a light source, a light guide panel spaced apart from the light source, the light guide panel having a light guide projection, wherein rounded corners of the mold frame groove and the light guide projection are cooperative to maintain the light guide panel and the light source in spaced relation. Accordingly, Kitazawa does not cure the deficiencies of Lee with respect to the proposed rejection of Claim 11, and Applicant respectfully submits that the rejection under §103 should be withdrawn.

New Claims 16-18

Claims 16-18 depend from Claims 5, 8 and 11, respectively, and further recite:

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the light guide panel defines a peripheral edge, the peripheral edge being formed in part by the light guide projection.

Accordingly, Claims 16-18 are further distinguishable from Lee, wherein the locking protrusions **a** extend from a face of the light-inducing plate **105** and do not form a part of the peripheral edge of the light inducing plate **105**.

CONCLUSION

Accordingly, Applicant submits that the present application is in condition for allowance and the same is earnestly solicited. Should the Examiner have any small matters outstanding of resolution, he is encouraged to telephone the undersigned at 919-854-1400 for expeditious handling.

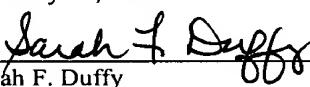
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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, DC 20231, on February 12, 1999.


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Date of Signature: February 12, 1999